

ABSTRACT

THE EFFECT OF RED GINGER (*Zingiber officinale Roscoe*) EXTRACT ON MALE MICE (*Mus musculus*) UNDERGO GASTRIC PEPTIC ULCERS INDUCED BY INDOMETHACINE

Katherine Julia Pratiwi. Roostantia Indrawati. Edhi Rianto

Fakultas Kedokteran Universitas Airlangga

Introduction : *Zingiber officinale Roscoe* has an oil contents of volatile components (essential oil) and non- volatile components (Oleoresin) which can be used as a drug to treat digestive problems through anti-inflammatory mechanism. The main mechanism of occurrence of peptic ulcer induced by indomethacine is an inflammatory effect due to non-selective COX inhibitor. The purpose of this study is to find out the protective effects of the *Zingiber officinale Roscoe* usage in reducing the occurrence of peptic ulcer.

Methods : This study used post test control group design. Randomly selected of 28 male mice were classified into four groups. Group I (Negative Control, received 30 mg/kg bodyweight of indometachine), Group II (Dosage 1, receive 30 mg/Kg bodyweight of indomethacine and *Zingiber officinale Roscoe* 70 mg/Kg bodyweight), Group III (Dosage 2, receive 30 mg/Kg bodyweight of indomethacine and *Zingiber officinale Roscoe* 140 mg/Kg bodyweight), and Group IV (Dosage 3, receive 30 mg/Kg bodyweight of indomethacine and *Zingiber officinale Roscoe* 280 mg/Kg bodyweight). Indomethacine and *Zingiber*

officinale Roscoe was given orally. The parameters measured in this study are the number of macroscopic gastric lesion as a manifestation of peptic ulcer.

Results : the results of this study showed significant differences in the number of lesions among the first group as a negative control group and Group III as a treatment group (F test, $p < 0,05$), and there is no significant difference between treatment groups (II, III, IV) with different doses (F test, $p > 0,05$).

Conclusion : *Zingiber officinale Roscoe* can reduce the occurrence of gastric peptic ulcer.

Key words : Indometachine, *Zingiber officinale Roscoe*, Peptic ulcer, Gastric macroscopic lesion

